Docket No.: 0032-0284P

Application No. 10/697,886 Amendment dated June 29, 2006

Reply to Office Action of March 29, 2006

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An immunoassay for human brain natriuretic peptide, hBNP,

comprising the steps of:

(a) contacting a solution suspected of containing hBNP with an enzyme-conjugated or

radioisotope-labeled Fab' fragment of an a first antibody which is reactive with a first, N-terminal

region of hBNP and an a second antibody reactive with a second, C-terminal region of hBNP

having an amino acid sequence lys-val-leu-arg-arg-his (SEQ ID NO:2), to produce complexes of

said enzyme-conjugated or radioisotope-labeled Fab' fragment, said hBNP, and said second

antibody reactive with a second region of hBNP;

(b) contacting said complexes of step (a) with an immobilized antibody reactive with the Fc

fragment of said second antibody reactive with a second region of hBNP to produce further

complexes of said enzyme-conjugated or radioisotope-labeled Fab' fragment, said hBNP, said

second antibody reactive with a second region of hBNP, and said immobilized antibody;

(c) recovering and washing said further complexes of step (b);

(d) when an enzyme-conjugated antibody is employed in step (a), contacting said further

complexes of step (c) with a substrate of said enzyme in an appropriate reaction buffer and

incubating so as to allow formation of the enzymatic reaction end product;

(e) determining the amount of said end product formed in step (d) when an enzyme-

conjugated antibody is employed in step (a), or determining the amount of radioactivity bound to

3

GMM/JMK/ph

said further complexes of step (c) when a radioisotope-labeled antibody is employed in step (a);

and

(f) relating the amount of said end product formed in step (e) or the amount of radioactivity

bound to said further complexes of step (e) to the amount of said hBNP via the use of a standard

curve for hBNP.

2. (Currently Amended) The immunoassay of claim 1, wherein said Fab' fragment of an a

first antibody which is reactive with a first region of hBNP recognizes the intramolecular

disulfide bridged loop structure of hBNP.

3. (Original) The immunoassay of claim 2, wherein said first antibody is produced by

hybridoma KY-hBNP-II, FERM BP-2863.

4. (Currently amended) The immunoassay of claim 1, wherein herein said second

antibody is produced by hybridoma BC203, FERM BP-3515.

5. (Original) The immunoassay of claim 4, wherein said first antibody recognizes the

intramolecular disulfide bridged loop of hBNP.

6. (Currently Amended) An immunoassay for human brain natriuretic peptide, hBNP,

comprising the steps of:

4

GMM/JMK/ph

Docket No.: 0032-0284P

Application No. 10/697,886

Amendment dated June 29, 2006

Reply to Office Action of March 29, 2006

(a) contacting a solution suspected of containing hBNP with an enzyme-conjugated or

radioisotope-labeled Fab' fragment of an a first antibody which is reactive with a first, N-terminal

region of hBNP and an a second antibody that specifically binds to a second, C-terminal region of

hBNP, having an amino acid sequence lys-val-leu-arg-arg-his (SEQ ID NO:2), which binding site

includes the C-terminal his residue, to produce complexes of said enzyme-conjugated or

radioisotope-labeled Fab' fragment, said hBNP, and said second antibody reactive with a second

region of hBNP;

(b) contacting said complexes of step (a) with an immobilized antibody reactive with the Fc

fragment of said antibody reactive with a second region of hBNP to produce further complexes of

said second enzyme-conjugated or radioisotope-labeled Fab' fragment, said hBNP, said second

antibody reactive with a second region of hBNP, and said immobilized antibody;

(c) recovering and washing said further complexes of step (b);

(d) when an enzyme-conjugated antibody is employed in step (a), contacting said further

complexes of step (c) with a substrate of said enzyme in an appropriate reaction buffer and

incubating so as to allow formation of the enzymatic reaction end product;

(e) determining the amount of said end product formed in step (d) when an enzyme-

conjugated antibody is employed in step (a), or determining the amount of radioactivity bound to

said further complexes of step (c) when a radioisotope-labeled antibody is employed in step (a);

and

(f) relating the amount of said end product formed in step (e) or the amount of radioactivity

bound to said further complexes of step (e) to the amount of said hBNP by a standard curve for

hBNP.

5

GMM/JMK/ph

Docket No.: 0032-0284P

7. (Currently Amended) The immunoassay of claim 4, wherein said first antibody is

produced by hybridoma KY-hBNP, FERM BP-2863.

8. (Original) An immunoassay for human brain natriuretic peptide, hBNP, comprising the

steps of:

(a) contacting a solution suspected of containing hBNP with a Fab' fragment of an

antibody which is reactive with a first, N-terminal region of hBNP and an antibody that

specifically binds to a second, C-terminal region of hBNP, having an amino acid sequence lys-

val-leu-arg-arg-his (SEQ ID NO:2), which binding site includes the C-terminal his residue, to

produce complexes of said Fab' fragment, said hBNP, and said antibody reactive with a second

region of hBNP;

(b) contacting said complexes of step (a) with an immobilized antibody reactive with

the Fc fragment of said antibody reactive with a second region of hBNP to produce further

complexes of said Fab' fragment, said hBNP, said antibody reactive with a second region of

hBNP, and said immobilized antibody;

(c) recovering and washing said further complexes of step (b);

(d) determining the amount of said further complexes and

(e) relating the amount of said further complexes determined in step (d) to the amount of

said hBNP by a standard curve for hBNP.

GMM/JMK/ph

6